Designing a Vaccination Program

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Vaccination has never guaranteed absolute protection and probably never will. There are too many factors involved which influence success or failure of a vaccination program. An awareness of these factors can help to increase cattle resistance to disease and decrease the challenge, contributing greatly to successful beef production.

A vaccination program is much like buying automobile insurance. You pay for protection hoping that you never have to use it. The cost of this protection is the cost of the vaccine, and the labor to gather and handle cattle. Certainly it is more cost effective for your veterinarian to help you prevent disease rather than treat sick animals. However, like automobile insurance, it is not biologically or economically feasible to insure against everything. Achieving protection to every known disease in every animal in a herd is impossible for a variety of reasons. Even if it were possible, it would likely not be cost effective. Our goal then for a vaccination program for a beef herd is to raise the level of immunity in a sufficient number of susceptible animals to prevent epidemics and severe monetary losses.

This vaccination program needs to take into account risks of disease exposure identified by your veterinarian for your operation in your specific area. Once these risks are identified, a decision can be made as to the economics of buying protection (insurance) from that risk (chance of a disease outbreak).

There are good and bad vaccination programs, just as there are good and bad insurance policies. The quality of a vaccination program involves the immune status of the animals, selection of proper vaccines, timing, and proper administration of vaccines. These four factors are somewhat within our control and should be used to our advantage. Because we have the opportunity to manipulate these factors, most people concentrate their efforts in this area. However, we should keep in mind the importance of decreasing the field challenge as well as increasing effectiveness of our vaccination efforts.

Just because you have a certain amount of protection doesn't mean that you can be careless. You wouldn't drive your car over a cliff just because you had a good auto insurance policy. With vaccination programs, this caution means reducing the amount of field challenge by improved isolation, sanitation, and security practices. Your herd's resistance must be evaluated in light of the degree of challenge. A successful program should not only strive to increase the resistance of the herd, but decrease the amount of challenge. Almost any vaccination program will work if the cattle are not challenged. Anything that you can do to minimize the challenge helps to achieve the desired effect of your vaccination program.

Finally, good health management does not come in a syringe. Your attention to detail in light of vitamin, mineral, protein and energy nutritional status is critical to an animal's immune competence (ability to respond) to your vaccination program. Minimize stress and maximize good animal husbandry practices at appropriate times in each animal's life cycle.

Work with your local veterinarians to design a plan specifically tailored to the needs of your herd and area. They will know best the disease patterns of your area and the specific health profile of your herd.

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